

**BASIC SKILL****Mathematics Assessment**

Write the following numbers in scientific notation.

1. 156.90 \_\_\_\_\_ 3. 0.0345 \_\_\_\_\_

2. 12 000 \_\_\_\_\_ 4. 0.008 90 \_\_\_\_\_

Expand the following numbers.

5.  $1.23 \times 10^6$  \_\_\_\_\_ 7.  $1.54 \times 10^4$  \_\_\_\_\_

6.  $2.5 \times 10^{-3}$  \_\_\_\_\_ 8.  $5.67 \times 10^{-1}$  \_\_\_\_\_

Solve the following and put your answer in scientific notation.

9.  $\frac{6.6 \times 10^{-8}}{3.3 \times 10^{-4}} =$  \_\_\_\_\_ 13.  $(1.56 \times 10^{-7}) + (2.43 \times 10^{-8}) =$  \_\_\_\_\_

10.  $\frac{7.4 \times 10^{10}}{3.7 \times 10^3} =$  \_\_\_\_\_ 14.  $(2.5 \times 10^{-6}) \times (3.0 \times 10^{-7}) =$  \_\_\_\_\_

11.  $\frac{2.5 \times 10^8}{7.5 \times 10^2} =$  \_\_\_\_\_ 15.  $(1.2 \times 10^{-9}) \times (1.2 \times 10^7) =$  \_\_\_\_\_

12.  $(2.67 \times 10^{-3}) - (9.5 \times 10^{-4}) =$  \_\_\_\_\_ 16.  $(2.3 \times 10^4) \times (2.0 \times 10^{-3}) =$  \_\_\_\_\_

Give the number of significant digits in the following measurements.

17. 2.9910 m \_\_\_\_\_ 19. 0.006 70 kg \_\_\_\_\_

18. 5600 km \_\_\_\_\_ 20. 809 g \_\_\_\_\_

Carry out the following problems and give the answer in the correct number of significant digits.

21.  $\frac{2.674 \text{ m}}{2.0 \text{ m}} =$  \_\_\_\_\_ 23.  $9.0 \text{ cm} + 7.66 \text{ cm} + 5.44 \text{ cm} =$  \_\_\_\_\_

22.  $5.25 \text{ L} \times 1.3 \text{ L} =$  \_\_\_\_\_ 24.  $10.07 \text{ g} - 3.1 \text{ g} =$  \_\_\_\_\_

Solve for x in the following problems.

25.  $\frac{3x}{y} = \frac{6g}{b}$  \_\_\_\_\_ 27.  $\frac{2x^2}{3} = dg$  \_\_\_\_\_

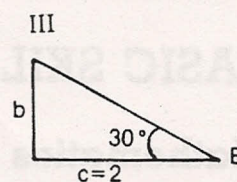
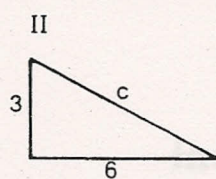
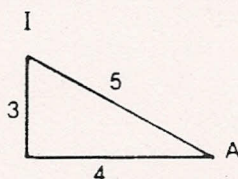
26.  $d = \frac{t}{x}$  \_\_\_\_\_ 28.  $\frac{2\sqrt{x}}{c} = y$  \_\_\_\_\_

Make the following conversions.

29. 4008 g = \_\_\_\_\_ mg 31. 239 mm = \_\_\_\_\_ cm

30. 48 mL = \_\_\_\_\_ L 32. 38 kg = \_\_\_\_\_ mg





33. For triangle I above, what is the cosine of angle A? \_\_\_\_\_

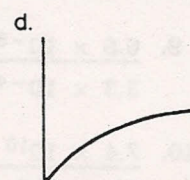
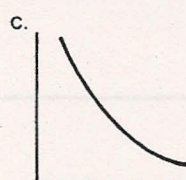
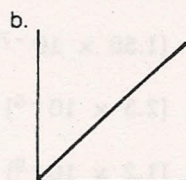
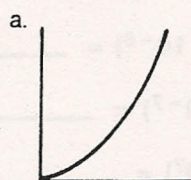
34. What is the tangent of angle A for the triangle I? \_\_\_\_\_

35. Find side c for triangle II. \_\_\_\_\_

36. For triangle III, express side b in terms of a trigonometric function of angle B and side c.

\_\_\_\_\_

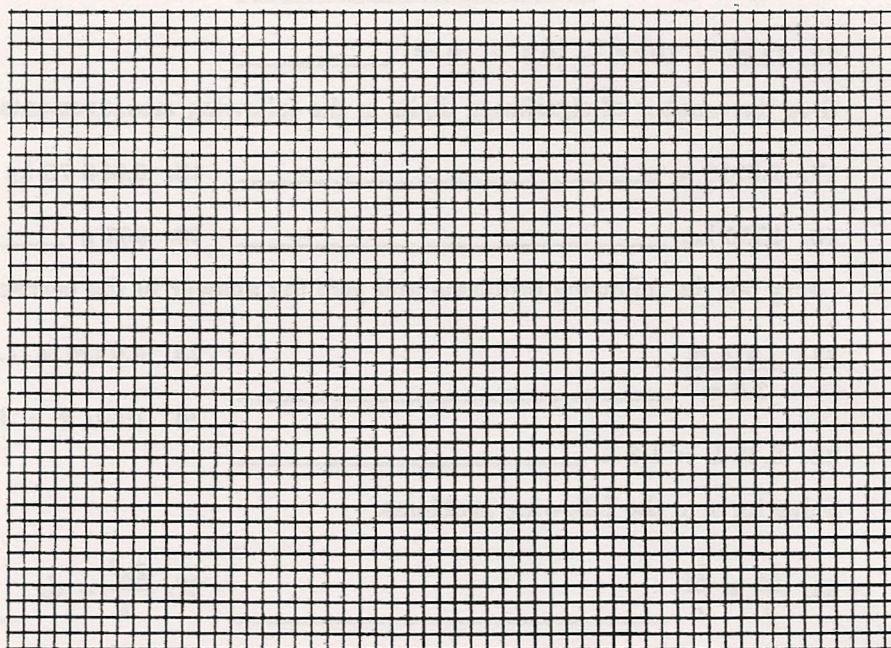
37. Which graph below represents an inverse relationship? \_\_\_\_\_



38. Which of the above graphs could have the equation  $y = kx^2$ ? \_\_\_\_\_

39. Plot a graph of the data in the table below.

x	y
0	2
0.5	8
1	13
2	26
3	37
4	61



40. What is the slope of the line? \_\_\_\_\_

41. What is the value of y when  $x = 4$ ? \_\_\_\_\_

42. What is the value of y when  $x = 6$ ? \_\_\_\_\_

43. What is the value of x when  $y = 0$ ? \_\_\_\_\_